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# ***JPRS Report***

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# **Science & Technology**

***Japan***

1992 INDUSTRIAL STANDARDIZATION

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## **1. Outlook of Industrial Standardization in Japan**

### **1.1 JIS as Voluntary National Standards**

In Japan, industrial standardization is promoted at the national, industry association, and company levels. JIS (Japanese Industrial Standards) are voluntary national standards for industrial and mineral products. Various industry associations also establish voluntary standards for their specific needs. Many companies have a set of company standards (operation manuals, etc.), some of which were adopted from JIS and/or industry association standards. Roughly speaking, the need for common practices in companies of the same industrial sector will lead to industry association standards, and the same need in terms of wider application will promote establishment of JIS.

One means of promoting industrial standardization is the JIS marking system. The JIS marking system is a voluntary certification system. Some 900 items with JIS product standards are designated for JIS marking. Factories manufacturing products that satisfy JIS will be permitted to affix JIS mark on their products if their company standards and practices of quality control are judged by the relevant Minister to guarantee continuous production of products satisfying JIS.

The aims of JIS and the JIS marking system are to improve quality of products, rationalize production, ensure fair and simplified trade, etc., through the establishment and dissemination of appropriate and rational standards. Over 8,300 JIS are established for these purposes, and some 16,000 permissions (or approvals in the case of foreign factories) are given to factories to affix the JIS mark on their products.

### **1.2 Internationalization of JIS**

Standards and certification systems may have significant adverse effects on external trade when they are different among countries. These concerns have become one of the central issues of international trade especially since 1970's. First concrete international result is the GATT Standards Code (Agreement on Technical Barriers to Trade). Japan ratified this Code in 1980, and has been promoting harmonization of domestic standards with international standards. Also, JISC (Japanese Industrial Standards Committee---JIS deliberating organ) has been participating in ISO (International Organization for Standardization) and IEC (International Electrotechnical Commission), two major organs for international standardization, since 1952 and 1953 respectively.

With ratification of the GATT Standards Code, JIS marking system was modified to make it possible for foreign factories to get approvals on an equal basis with domestic factories, and thereby further promoting the efforts to harmonize JIS with the corresponding international standards.

In 1985, the Government decided to internationalize Japan's economy and society (Action Program for Improved Market Access) to maintain the free trade system. One of the most important areas of the Action Program related to standards and certification.

The Action Program included ensuring transparency in the standards making process, and accepting foreign test data as much as possible under the existing certification systems. To further facilitate exports to Japan, and also in line with the 6th Long-range Plan for the Promotion of Industrial Standardization, it was decided that JIS marking system use foreign test data for approving foreign factories.

### *1.3 Future Activities of JIS*

In 1991, the 7th Long-range Plan for the Promotion of Industrial Standardization was established. This Plan stresses ① promotion of internationalization, ② the role of standardization and basic principle of establishment and revision of JIS standards, ③ approach for challenging major subjects such as realization of comfortable and affluent lives, and ④ efficient operation of the JIS marking system.

### *1.4 History of JIS*

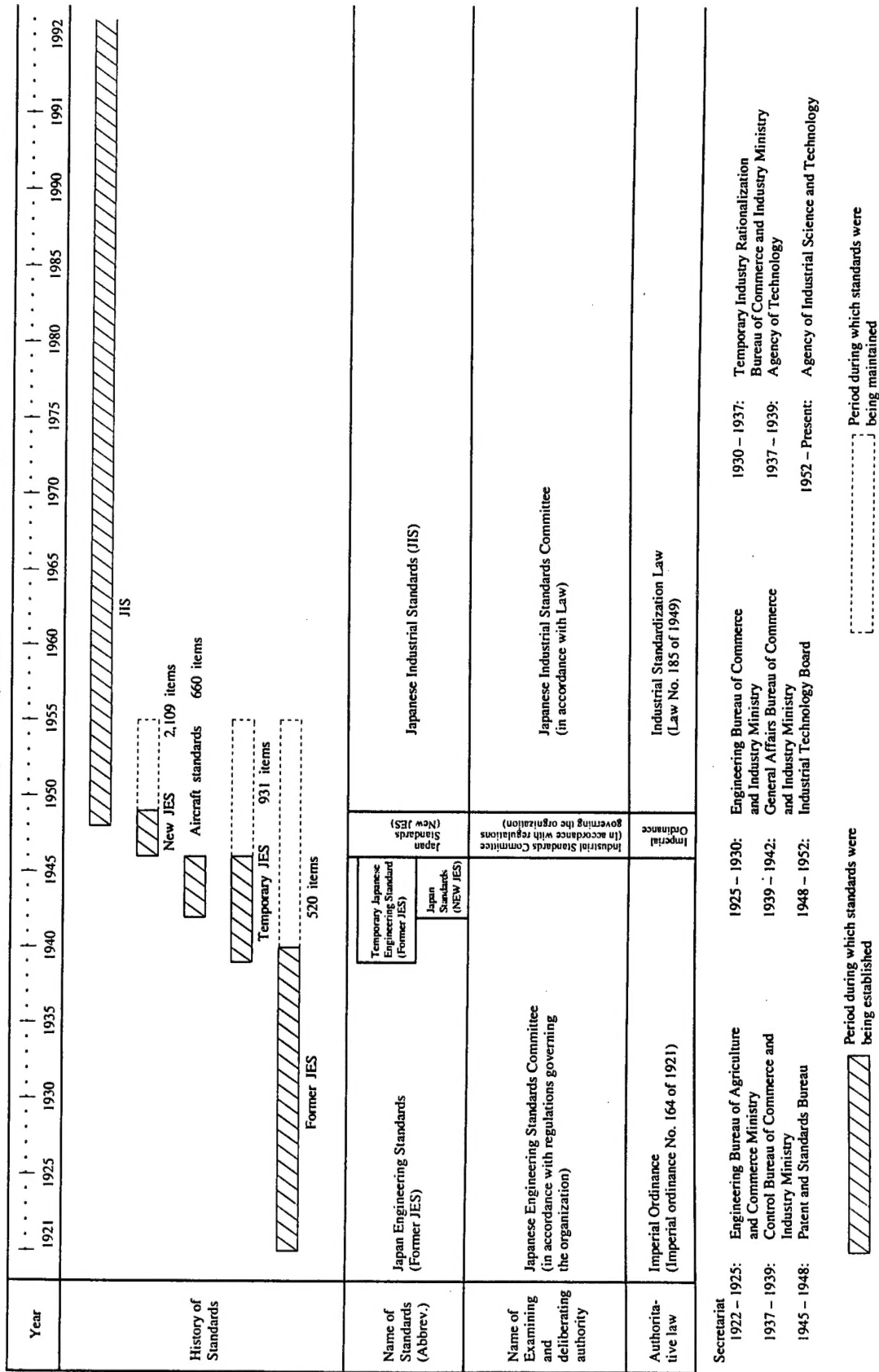
In Japan, industrial standardization started rather late compared with European countries. It started with procurement specifications of Government owned factories in the Meiji era. Examples included standards for procurement of commodities by the army and navy during the Meiji Era (1868 - 1912), and standard specifications for steel water pipes at the beginning of the Taisho Era (1912 - 1926). In 1921, the Japanese Engineering Standards Committee (predecessor of JISC) was founded and this committee established 520 JES (Japanese Engineering Standards) by April, 1941. During World War II (1939 - 1945) the Committee established 931 T-JES (Temporary JES) with simplified contents and procedures. Also, during the War, 660 Japanese Aircraft Standards were established under the Aircraft Manufacturing Service Law.

After World War II, the Industrial Standards Committee was formulated to study and revise JES and T-JES as well as to establish new standards. This committee established some 2,100 New-JES between 1946 and 1949. In 1949, the Industrial Standardization Law was promulgated and the JISC (Japanese Industrial Standards Committee) was established as an organ to deliberate JIS. Since 1949, JISC has deliberated on JIS, and with JISC opinions, the relevant Ministers of the Government have established, revised, and withdrawn JIS. As a result, the total number of JIS in force is 8,359 at the end of March 1992.

### *1.5 JIS and Technical Regulations*

Although JIS are a major part of national standards for industrial and mineral products, a number of other laws set forth technical regulations for protecting human life, health, the environment, etc. Most of them are mandatory regulations such as technical regulations for electronic appliances under the Electrical Appliance and Material Control Law. Under the Industrial Standardization Law, these technical regulations must esteem JIS when they are established.

Figure 1. History of Japanese Industrial Standards



## 2. JIS

### 2.1 Coverage and Items for Standardization

JIS covers industrial and mineral products with the exception of (1) medicines, (2) agricultural chemicals, (3) chemical fertilizers, (4) silk yarn, and (5) foodstuffs and agricultural and forest products designated under the Law Concerning Standardization and Proper Labelling of Agricultural and Forestry Products.

Standardization items:

- (1) Category, type, form, dimension, structure, equipment, quality, grade, component, performance, durability, or safety of industrial and mineral products
- (2) Methods of manufacturing, methods of designing, methods of drawing, methods of using, or per unit material requirement of industrial and mineral products, or methods of operation of safety condition of production
- (3) Category, form, dimension, structure, performance or grade, or method of packaging of industrial and mineral products
- (4) Methods of testing, analyzing, appraising, inspecting, verifying, or measuring of industrial and mineral products
- (5) Terms, abbreviations, symbols, marks, preferred numbers, or units related to industrial and mineral technologies
- (6) Designs, methods of execution, or safety conditions of buildings and other structures

Those established JIS have the following symbols.

For example: JIS C 7501

The letter symbol indicates the technology area (JIS Division), and the 4 digit number is added to put the JIS in an appropriate place in the JIS Division (Please see the explanation of the LIST of JIS).

Letter symbols and JIS Divisions are shown below.

Letter Symbol	Division	Letter Symbol	Division
A	Civil Engineering and Architecture	L	Textile Engineering
B	Mechanical Engineering	M	Mining
C	Electronic and Electrical Engineering	P	Pulp and Paper
D	Automotive Engineering	R	Ceramics
E	Railway Engineering	S	Domestic Wares
F	Shipbuilding	T	Medical Equipment and Safety Appliances
G	Ferrous Materials and Metallurgy	W	Aircraft and Aviation
H	Non-ferrous Metals and Metallurgy	X	Information Processing
K	Chemical Engineering	Z	Miscellanea

Table 1. Japanese Industrial Standards Committee

Japanese Industrial Standards Committee (JISC)	
General Meeting	
Standards Council	
Divisional Councils on:	(Mar. 1992)
ISO	Number of Technical Committee
IEC	5
Accreditation and Certification	1
Civil Engineering	3
Architecture	18
Iron and Steel	27
Non-ferrous Metals	27
Natural Resources and Energy	18
Welding	26
Basic Items	27
Chemical Products	27
Chemical Analysis	25
High Molecules	13
Textiles	49
Ceramics	44
Daily Necessities	26
Machine Elements	58
FA	91
Precision Machinery	21
General Machinery	35
Aircrafts and Automobiles	53
Railway and Rolling Stocks	33
Shipbuilding	18
Distribution of Goods	41
Electricity	23
Electronics	121
Household Electrical Appliances	56
Information Processing	47
Medical and Safety Facilities	24
Atomic Energy	35
	15
( 30 )	( 1007 )

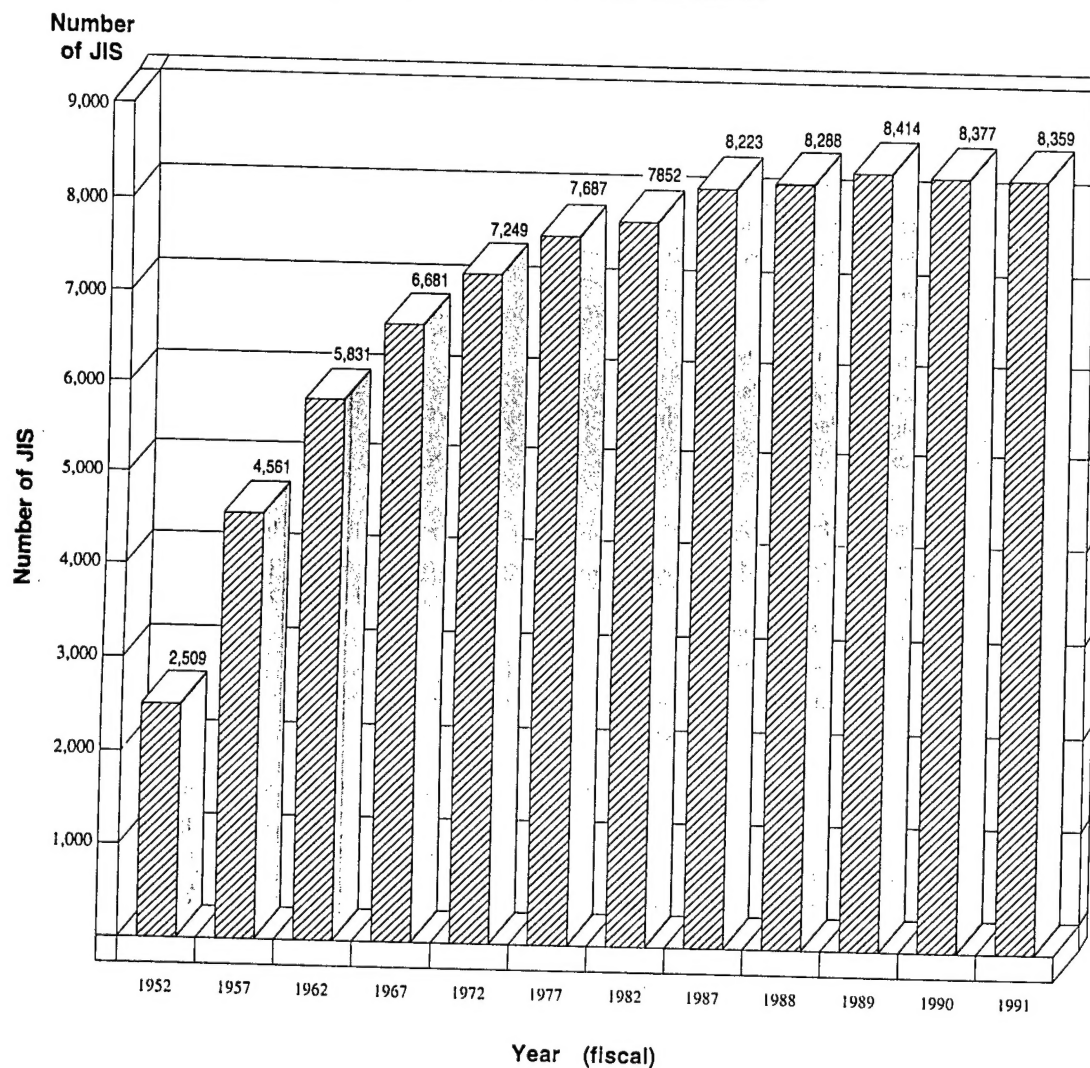


JIS may be classified by their nature into three categories; product standards, working method standards, and basic standards. Roughly speaking there are some 4,000 product standards, 1,600 working method standards, and 2,700 basic standards.

Table 2. Domains and Aspects of Standardization

Domains	Substance (Products)	Action (Methods)	Basic
Aspects	Shape, dimensions, Structure Equipment, Installation, Components Physical characteristics Chemical characteristics Appearance, Noise, Function Performance, Capability (Power) Durability, Reliability, Maintenability, Safety, Others	Operation Procedure Methods	Metrological unit Terminology, Language used Symbols, Codes Systems Progression Numerical Values Conditioning Classification

Figure 2. Growth of JIS Standards



## 2.2 Development of JIS

As JIS are voluntary standards, it is essential to get the consensus of interested parties such as, manufacturers, users and consumers, and academic societies as much as possible in order to assure their effective application. At the same time, resources available for the activities are limited, and standards establishment requires time. Therefore, every five years, JISC formulates a Long-range Plan for the Promotion of Industrial Standardization. Every year, requests from various parties for the establishment of JIS are selected and their drafting is usually entrusted to the most relevant industrial associations or academic societies. When lots of studies and research are needed before actual drafting, they are entrusted to relevant private research institutes or affiliated institutes of the Agency of Industrial Science and Technology. After drafting is completed, the draft JIS is submitted by the relevant Minister to the JISC. JISC modifies the draft JIS, if necessary, and returns the draft to the Minister for its establishment as JIS. The Minister announces it in the Official Gazette, when he thinks the draft reflects the opinions of all the parties with substantial interests and is not discriminative, in their application, to any person under the same condition. So, measures to get the widest possible consensus on the JIS are taken. The text itself is published by JSA (Japanese Standards Association---nonprofit foundation established for the promotion and popularization of industrial standardization).

Figure 3. Flow Chart of Establishment and Revision of JIS

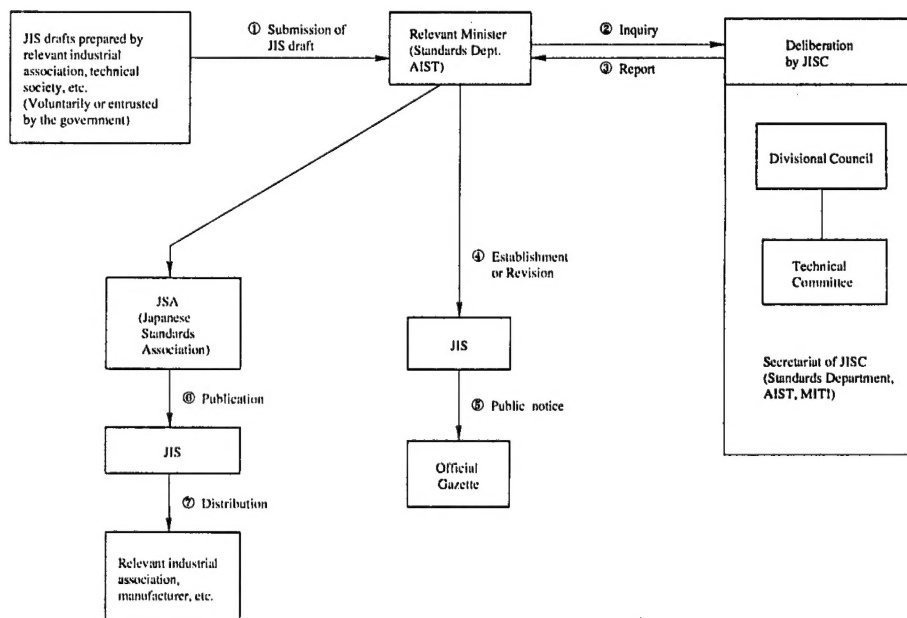


Table 3. Japanese Industrial Standards established, revised,  
and abolished during the Fiscal Year 1991

JIS Divisions	Number of JIS newly established	Number of JIS revised	Number of JIS withdraw	JIS in force as of Mar. 31, 1992
A Civil Engineering and Architecture	11	33	11	532
B Mechanical Engineering	15	58	2	1,313
C Electronic and Electrical Engineering	12	91	43	792
D Automotive Engineering	3	13	3	343
E Railway Engineering	0	22	3	218
F Shipbuilding	4	5	0	532
G Ferrous Materials and Metallurgy	2	25	5	321
H Non-Ferrous Metals and Metallurgy	11	12	1	393
K Chemical Engineering	22	31	7	1,561
L Textile Engineering	6	55	8	308
M Mining	0	4	9	211
P Pulp and Paper	0	1	0	95
R Ceramics	2	24	8	241
S Domestic Wares	6	22	38	237
T Medical Equipment and Safety Appliances	5	9	1	290
W Aircraft and Aviation	6	0	19	94
X Information Processing	21	8	5	191
Z Miscellanea	21	33	2	687
Packaging Welding Radioactivity				
Total:	147	446	165	8,359

### 2.3 *Transparency of JIS Development Process*

Japan agreed to sign the Agreement on Technical Barriers to Trade (GATT Standards Code) in April 1980, and since then has made efforts to implement the agreed upon duties. In line with this Agreement, a number of decisions were taken by high levels of the Government and the Agency of Industrial Science and Technology (Secretariat of JISC), in 1983, made it possible for foreigners and foreign affiliated firms to participate in JIS drafting committees. In addition, in 1985, foreigners and foreign affiliated firms were given the opportunity to propose JIS drafts and attend the Divisional Councils and Technical Committees of JISC, as well as offer their opinions there. In 1987, JISC welcomed foreigners to participate in the Technical Committees for the first time as registered members.

There are various channels that provide information about the above foreign participation. They include "News from MITI", disseminated widely overseas to ISO/IEC national members, etc., and to foreign contact points in Japan such as Embassies and Chambers of Commerce in Japan, which provides necessary information for participating in JIS drafting committees of private associations three weeks before they start deliberations. Also the "Tsusho Koho" and "Tsusansho Koho" are published daily, providing necessary information three weeks in advance for participation and giving opinions in JISC deliberations and nine weeks in advance for giving opinions to the draft standards before they are promulgated.

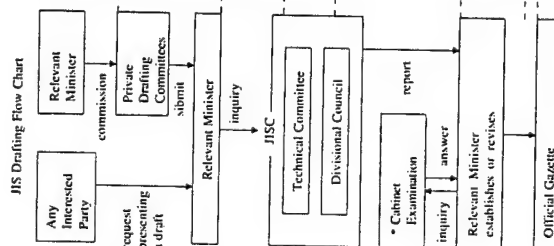
In order to ensure that foreigners use the opportunity to participate in JIS deliberations and to further ensure transparency of the system, the following steps are continuously taken:

- (1) announcement of the yearly schedules as well as additional schedules for JIS drafting committees commissioned to private associations by MITI,
- (2) announcement of deliberation schedules for establishing or revising JIS in JISC or providing JIS drafts, and permitting foreign representatives to participate and offer opinions
- (3) publishing outlines of JIS drafts after JISC deliberations and, if requested, providing JIS drafts and accepting opinions according to the GATT Standards Code,
- (4) resumption of JISC deliberation when important opinions are presented in step (3),
- (5) notification to GATT Secretariat when new JIS marking items are designated (nine weeks before promulgation).

The present process ensuring transparency is shown in Figure 4 "Transparency in the JIS Drafting Process and the JIS Mark Item Designing Process."

Figure 4. Transparency in the JIS Drafting Process and the JIS Mark Item Designating Process

	News from MITI	Tousansho Koho (MITI/Tousho Koho (JETRO))	GATT Notification
Objective	To publicize opportunity to participate in JIS drafting committee	① To publicize opportunity to participate in Divisional Council and Technical Committee to submit opinions, along with the schedule and method of obtaining draft JIS. ② To publicize outline of JIS drafts and item designations according to GATT Standards Code	To notify information about designated JIS mark items according to GATT Standards Code
Form of Participation	Participate in deliberation as formal committee member	① Access to JIS draft or giving opinions in Divisional Council or Technical Committee ② Access to JIS drafts and submission	Opinion submission
Procedures for Participation	Show will to participate with personal history	① Show will to obtain draft. Bring written outline of opinions one week before deliberations start ② Submit written opinions with reasons	Written opinion with reasons
Timing of Publicizing/ Notification	The beginning of each fiscal year and as additional cases occur	① Publicized at the beginning of each fiscal year according to the implementation plan, and as additional cases occur, publicized. In both cases it takes place at least three weeks before deliberation starts in the Divisional Council or Technical Committee. ② Publicized after JISC deliberation, to widely receive comments at least nine weeks before deadline. Tousansho Koho and Tousho Koho are available world-wide.	After the JISC deliberation and at least 9 weeks before deadline
Dissemination	Foreign embassies, Chambers of Commerce in Japan, ISO/IEC national member bodies, standardizing bodies in foreign countries, etc.		GATT Office
Foreign Participation	Foreigners representing a country's industry, Japanese working in foreign companies in Japan	Any interested parties in JIS, including foreigners and Japanese in foreign companies	GATT TBT member country
	publicize at least 3 weeks before drafting starts	(in JIS Drafting ①) publicize at least 3 weeks before deliberation starts publicize at least 3 weeks before deliberation starts	
		(in JIS Drafting ②) (GATT TBT • 2.5.1) publicize at least 9 weeks before deadline announcement	(in JIS Mark Item Designation) (GATT TBT • 7.3.1) publicize at least 9 weeks before deadline announcement (GATT TBT • 7.3.2) notify at least 9 weeks before deadline announcement



\* This examination is carried out as an effort to preclude creation of new non-tariff barriers.

## 2.4 Long-Range Plan

Prior to the actual Plan endorsed in May 1991, Recommendations for the 7th Long-range Plan was handled over from JISC to MITI Minister in June 1990, outline of which is as follows:

### (1) Environment and Tasks of Industrial Standardization

Compared to the time of past Long-range Plans, today it has become more important for Japan to promote further international harmonization of the JIS (Japanese Industrial Standards) system and to more actively participate in international standardization activities since Japan, as a major economic power, should now take on a more vital role in supporting and strengthening the present free trade system.

New frontiers of JIS have been emerging to realize a comfortable and affluent lives, to accelerate the development and dissemination of new technologies including information technology, and to meet the challenges of global environmental issues. Other aspects which should be noted are changes in the JIS system such as significant improvement in quality control techniques of industries and diversifying demands of consumers. In order to prepare for these changes, it is necessary to operate the JIS and JIS marking system in a more effective manner.

### (2) Promotion of Internationalization

#### 1 Establishment of New Principle of "Internationalization"

The principle of "internationalization" should be reviewed so as to match the importance of international standardization and the obligations accompanying Japan's present economic status. In other words, standardization activities in Japan should become more internationally oriented in which more active participation and contribution to international standardization activities are encouraged. In addition, the international harmonization of JIS standards should be reinforced as comprehensively as possible.

#### 2 Improvement of Infrastructure to Implement New Principle of "Internationalization"

To implement the new principle of "Internationalization," the Government of Japan should make efforts to change attitudes in Japan towards international standardization activities. As specific measures, the Government of Japan should consider the following:

- To establish the principle of harmonization between international standards and JIS standards
- To link discussions for development of JIS standards with those for international standards
- To strengthen international standardization activities and reinforce efforts to maintain conditions for this process

- To try to harmonize JIS standards closely related to official procurement with relevant international standards in a prompt manner
- To introduce in the JIS marking system practical use of the results of the foreign certification schemes based on the international quality assurance system (ISO 9000 Series)

The Government and the private sector should make an effort to cooperate in implementing the following measures:

- To try to entrust the deliberation of international standards to the same organization as that for relevant JIS standards
- To promote closer linkage between the government and private sector
- To promote exchange of views in international fora
- To prepare the basic means for participating in international standardization activities using measures such as information technologies.

The private sector is expected to strengthen the following activities:

- To expand the technical area where JISC is working as secretariats of ISO/IEC TC/SC
- To propose more actively drafts of international standards
- To strengthen and expand supporting organizations for international standardization activities
- To accelerate international harmonization of standards of private organizations

### 3 Expansion of Technical Cooperation and Exchange of Experiences Concerning Standardization and Quality Control

Standardization and quality control, which are closely related to each other, are part of the technological infrastructure of industries. It is necessary to foster technical cooperation in this field to correspond to requests from developing countries. From this viewpoint, efforts should be directed toward securing human resources in this field. It should be noted that implementation phases of technical cooperation should be designed to incorporate appropriate measures reflecting the developing stage of the country cooperated with.

Furthermore, exchanges of quality control techniques between Japan and other developed countries should be encouraged in order to contribute to improving the trade imbalances of these countries.

### (3) Role of Standardization and Basic Principle of Establishment and Revision of JIS Standards

Although the basic role of standardization is unchangeable, it is always necessary to consider actual development and objectives of standardization activities in

parallel with social changes. The following should be considered when standards are established or revised.

- (i) To reflect the objectives of a standard when categories to be standardized are chosen
- (ii) To ensure that JIS standards are harmonized with corresponding international standards
- (iii) To promote standardization in an advanced, flexible, and swift manner
- (iv) To consider viewpoints of users and consumers more than before
- (v) To maintain JIS standards in an appropriate manner

When the above points are considered, it is necessary to take into account securing of human resources for standardization from various fields, vitalization of standardization activities in the private sector, promotion of dissemination of appropriate information on products, securing of linkage between standardization and research and development activities, and coordination of patent rights and the like.

#### (4) Approach for Meeting the Challenge of Major Issues

While respecting the above basic principle, the following role of standardization is stressed to correspond to major social and economic demands in Japan:

##### 1 Realization of Comfortable and Affluent Lives

The basic policy is to break away from the old paradigm where effectiveness was most important and to show flexibility in reflecting diversifying demands. When JIS standards are established or revised, securing the interests of consumers should be encouraged, to promote technologies which are compatible with man and the natural environment, to prepare for the future when the proportion of the elderly in society will be higher, to contribute to medical care and welfare, and to secure quality in services.

To determine the role of JIS standards in this field and to examine the required measures, a "Special Committee on JIS' Role and Daily Consumer Life" will be formed.

##### 2 Acceleration of Development and Dissemination of New Technologies

Concerning new technologies, it is important to stress the function of standards as the basis for supporting technology development through timely standardization of testing and evaluation methods as well as for disseminating new technologies through standardization initiatives for products development while also taking into account international collaboration.

##### 3 Challenging Global Environmental Issues

Extensive efforts should be made to collect advanced information. In addition, while linking them with research and development and international collaboration, standards should be developed for improving energy efficiency,



saving resources (recycling resources) and addressing the problems posed by substances which may damage the environment.

4 A More Efficient System for Providing Reference Materials

A more efficient system should be made for providing reference materials which are considered as international public assets. Units used in JIS standards should continue to be substituted by the international system of units (SI).

5 Contribution to Expanding Imports

Contribution of standardization to an open market policy is realized through internationalization of the JIS system. From a long term point of view, technical cooperation to developing countries should be stressed as well.

(5) Efficient Operation of the JIS Marking System

In selecting products which would be covered by the JIS marking system, attention should be paid to the original aims of the marking system, judging whether a product conforms to the relevant standard, while divergent consumer demands should be taken into account as well. Products which have already been covered by the JIS marking system should be reviewed from the same viewpoint, while taking individual circumstances into account.

To improve the efficiency of on-site inspections of the JIS marking system, a system should be established so that part of the on-site inspection process currently conducted by the regional Bureaus of International Trade and Industry can be entrusted to private inspection organizations.

In some cases, inspections for certain products should be strengthened to ensure the reliability of the JIS marking system.

To determine specific measures for the above items, a "Special Committee for the JIS Marking System" will be formed.

2.5 *Research on Standardization*

One of the recent characteristics of standardization activities is that more and more research is needed before actual drafting to get sufficient data for standards, etc. So, the subjects for research tend to increase. The research is entrusted to private research institutes or to affiliated institutes of AIST.

2.6 *Preparation of Draft JIS*

Although any interested people can ask the deliberation of draft JIS at JISC, recent practice is that the most relevant industrial association or academic society prepare a draft JIS. The association entrusted usually forms a committee consisting of representatives of manufacturers, consumers and users, and neutral parties. On average, it takes about one year to finalize the draft. These drafting committees in private organizations are open to foreigners under certain conditions. Every year, the work plan of drafting is announced in "News from MITI". Information about the drafting is also available during the process of drafting.

## 2.7 *Deliberation of Draft JIS*

The draft prepared by private associations will be submitted to JISC by the relevant Minister. JISC asks one of its Divisional Council to study it. The Divisional Council, if necessary, further asks the deliberation to one of its Technical Committees. When JISC considers the draft is appropriate and rational, JISC reports so to the relevant Minister. When the Minister thinks the draft does not unduly discriminate any interested parties, he decides JIS formally and announces it in the Official Gazette.

JISC (President: Isamu Yamashita) is an organization attached to the Agency of Industrial Science and Technology, MITI, with secretariat service by Standards Department of AIST, and its members are about 9,000 from manufacturers, consumers and users, and knowledgeable people.

Organization structure of JISC includes the General Assembly (some 240 members), the Standards Council, 30 Divisional Councils, and 1,007 Technical Committees attached to one of the Divisional Councils. Establishment, revision, and withdrawal of JIS fall under essentially the same procedures.

In JISC, like other similar organs, representatives of foreign interests are allowed to join or participate to state their opinions. So, deliberation schedule is announced in Tsusansho Koho and Tsusho Koho daily. In addition to this, foreigners and foreign representatives with Japanese nationality are participating in various Divisional Councils and Technical Committees as members.

Table 4. Outline of JISC Works (as of March 31, 1992)

(General)	Annual budget	Annual budget for 1991 FY:	¥755,783,000
		of which, subscription to ISO	¥131,957,000
		subscription to IEC	¥ 99,893,000
	Staff	Member of JISC:	9,010 persons
		Secretariat:	Standards Dept. 83 officials

---

(National Standardization)			
JIS	8,359 standards (see also Table 2)		
	established	147 standards	
	revised	446 standards	
	confirmed	912 standards	in 1991 FY
	withdrawn	165 standards	
JIS marking system	Permissions and approvals for JIS marking:		16,393
Committees	Divisional Councils:		30
	Technical Committees:		1,007

### 3. JIS Marking System

#### 3.1 Outline

Like many other voluntary national standards systems, the JIS system has its accompanying certification system to promote and popularize standardization. Products which are covered by corresponding JIS are designated as JIS mark products when such designation is deemed to promote standardization. In concrete terms, to affix JIS mark on the products will be for mutual benefits for manufacturers and consumers/users when it is difficult to know the quality of products especially in such cases as there exists many producers and many users, etc. This marking system has been open to foreign factories since 1980.

Table 5. Designated JIS Items in Each Division (related to MITI)  
(as of 31 March 1992)

JIS Divisions		Number of Designated JIS Items for Marking
A	(Civil engineering and architecture)	114
B	(Mechanical engineering)	153 (5)
C	(Electronic and Electrical engineering)	118
D	(Automotive engineering)	41
E	(Railway engineering)	11
F	(Shipbuilding)	1
G	(Ferrous material and metallurgy)	47
H	(Non-ferrous metal and metallurgy)	42 (5)
K	(Chemical engineering)	143 (1)
L	(Textile engineering)	18
M	(Mining)	9
P	(Pulp and paper)	11
R	(Ceramics)	42
S	(Domestic wares)	95
T	(Medical equipment and safety appliances)	14
W	(Aircraft and aviation)	1
X	(Information processing)	0
Z	(Miscellaneous-packaging, welding and radioactivity)	34
Total:		894 (11)

Note: Number of designated processing technique is indicated in the parenthesis, and is part of total figure.

Table 6. Number of Permissions and Approvals for JIS Marking  
(as of March 1992)

Division		Number	
Domestic	Ministry of International Trade and Industry	15,836	16,184
	Ministry of Transport	211	
	Ministry of Health and Welfare	137	
Overseas		209	
Total:		16,393	

### 3.2 *Certification Method*

The certification system is based on factory assessment on the conformity of products to specific standards and their quality control based upon company standards. The items of assessment are the following.

(1) Manufacturing or Processing Facilities

Whether the applying factory has the specified facilities for manufacturing or processing.

(2) Testing Facilities

Whether the applying factory has the specified testing facilities.

(3) Test Methods

Whether testing is performed according to the corresponding JIS and specified measures.

(4) Quality Control Method

Quality control is performed by the following methods.

(4-1) Company standards are concretely and systematically established satisfying the specification of the corresponding JIS and individual examination items on (1) quality, test, and storage of the product, (2) quality, test, and storage of materials for production, (3) control items and control methods of production process, quality characteristics and their testing methods, and working procedures, (4) control of production and testing facilities, (5) control of subcontracts, and (6) user complaints. Also, these company standards are appropriately reviewed and understood by the employees.

(4-2) Control of final products

Whether testing and storage of products are appropriately performed based on the company standards.

(4-3) Control of materials

Whether testing and storage of materials are appropriately performed based on the company standards.

(4-4) Control of processing

- (1) Whether each process of production and testing are properly conducted in line with the company standards and controlled by necessary methods.
- (2) Whether appropriate action is taken for defects and irregularities.
- (3) Whether working conditions are properly maintained.

(4-5) Control of facilities

Whether checking, testing, calibration, maintenance, etc., of the equipment are properly performed according to the company standards, and their accuracy and performance are appropriately maintained.

(4-6) Control of subcontract work

Whether subcontract work is appropriately managed according to the company standards.

(4-7) Handling of complaints

Whether complaints are properly handled according to the company standards, and necessary improvements are made.

(4-8) Maintenance and utilization of the records

Whether the records on the above mentioned items are maintained for and used for promotion of quality control.

(5) Other technical manufacturing conditions necessary for quality control

- (5-1) Whether standardization and quality control are systematically performed.
- (5-2) Whether the factory designates a qualified "quality control promoter".

3.3 *Commodities Applicable for JIS Marking System*

At present, 894 products are designated for JIS marking by MITI, 52 by the Ministry of Transport, and 16 by the Ministry of Health and Welfare, and the number of JIS corresponding to these designation is 1,629, 155, and 20 respectively. These figures include designated technologies.

### 3.4 *Permission and Approval*

As of March 1992, 16,393 permissions and approvals have been granted to factories including 209 approvals to foreign factories in 16 countries. (see Table 5, etc.)

### 3.5 *Supervision of JIS marked Products*

The relevant Minister reserves the right to inspect JIS permitted (or approved) factories when he thinks it necessary.

Systematic measures are (1) examination of the annual report on the state of technical conditions of production by the JIS factories, (2) report of monitoring system, (3) purchase test, and (4) notification inspection.

The monitoring system (supervisor's system on the improvement of consumer living standards) is established to oversee the quality and marking aspects of consumer goods including JIS marked products. Some 700 housewives are monitors who report to MITI when JIS marked products are deemed to be not in conformity with JIS. If reported, the Minister takes necessary action including eventual rescindment of the permission after on-site inspection of the factory.

In addition to the monitoring, market purchase product testing is conducted for certain products.

For illegal marking such as affixing JIS mark on the product without permission, penal servitude not exceeding one year or a fine not exceeding 500,000 yen will be levied.

### 3.6 *Notification Inspection*

Since 1980, following the revision of the Industrial Standardization Law, it became possible to utilize private inspection bodies for a follow-up inspection. When the relevant Minister considers it necessary to check the state of quality control, etc., judging from the extent of the revision of the corresponding JIS or state of quality control and other technical condition of production, the Minister can ask JIS approved factories to undergo "notification inspection." Notification inspection is a check by a designated inspection institute on conformity of products with relevant JIS, maintenance of testing facilities, methods of testing and record keeping on testing. JIS approved factories are also obliged to report once a year on the state of their manufacturing and quality control to the relevant Minister.

For reference, two kinds of JIS mark are illustrated in the below.

Fig. A



Fig. A: The mark to be affixed by the manufacturer of the designated commodities provided in Article 19. of the Industrial Standardization Law, to the designated commodities, their packages, containers or invoices when the manufacturer has obtained permission or approval.

Fig. B

Item of designated processing technique



Fig. B: The mark to be affixed by the manufacturer using the designated processing techniques provided in Articles 25. of the Industrial Standardization Law, to the processed commodities, their packages, containers or invoices when the manufacturer has obtained permission or approval.

#### 4. Approval of JIS Marking for Foreign Factories

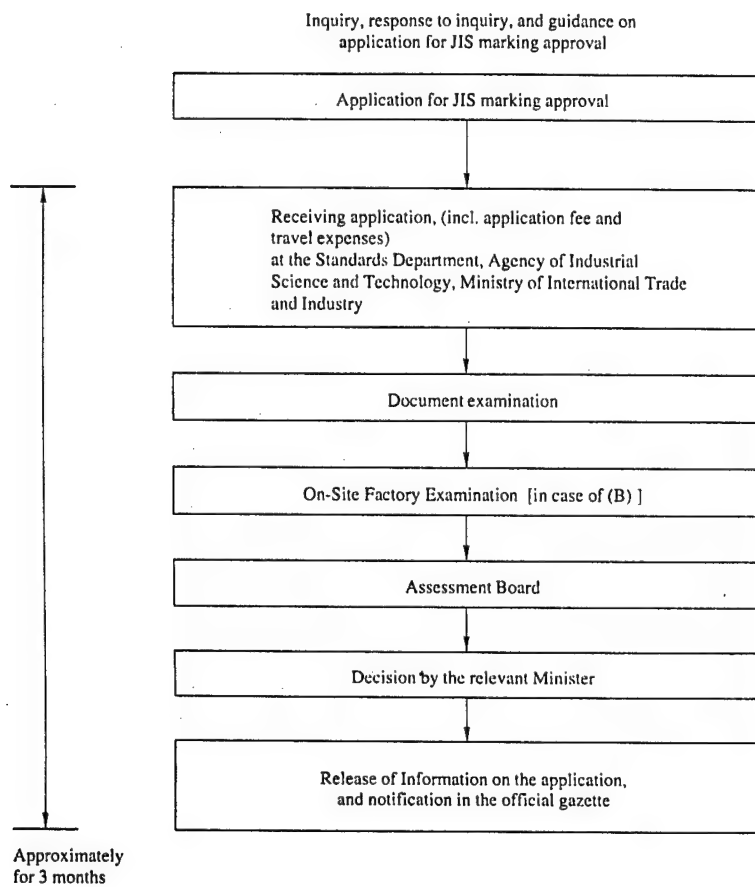
##### 4.1 Outline of New Scheme

In substance, there exists no difference between the treatment for foreign factories and that for domestic factories. Moreover, to make the acquisition of JIS mark easier for foreign factories, it has become possible to use the test data on on-site examination of the applying factory generated by appropriate foreign institutes.

A company which wishes to have an on-site factory examination by inspectors of the Japanese Government can of course have such examination as before. In this case, the company should first submit an application and pay Jap. Yen 199,100 + air fare and accommodations for two inspectors. Then, the inspectors will be dispatched to conduct an on-site factory examination.



**Figure 5. Flow Chart from Application through Approval for JIS Marking**



**Figure 6. JIS Marking System for Foreign Factorles**

(Note) A foreign factory seeking JIS marking approval can choose either scheme (A) or (B).

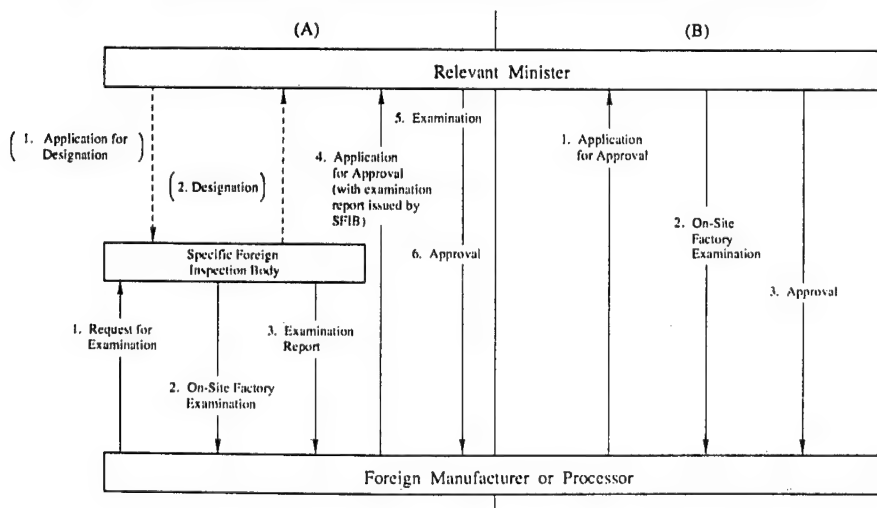


Table 7. The List of Accredited Inspection Bodies (In Japan) for Notification  
Inspection of JIS Mark Permitted Factories

No.	Name	Address	Telephone
1.	Japanese Standards Association	4-1-24 Akasaka Minato-ku Tokyo 107	03-3583-8060 Fax 03-3586-2014
2.	JMI Institute	1-9-15 Akasaka Minato-ku Tokyo 107	03-3583-4131 Fax 03-3582-3189
3.	Japan Electrical Testing Laboratory Inc.	5-14-12 Yoyogi Shibuya-ku Tokyo 151	03-3446-5121 Fax 03-3468-9090
4.	Japan Vehicle Inspection Association	1-9-3 Akasaka Minato-ku Tokyo 107	03-3582-3311 Fax 03-3582-2935
5.	Japan Camera and Optical Instrument Inspection and Testing Institute	1-25 Chiyoda-ku Tokyo 102	03-3263-7111 Fax 03-3234-4650
6.	Japan Bearing Inspection Institute	2-25-3 Nishi-Shinbashi Minato-ku Tokyo 105	03-3436-0071 Fax 03-3436-1547
7.	Japan Testing Centre for Construction Materials	Ohita-Bld. 1-3 Kohunc-cho Nihonbashi Chyuo-ku Tokyo 103	03-3664-9211 Fax 03-3664-9215
8.	General Building Research Corporation of Japan	5-8-1 Huzisirodai Suita-shi Osaka-hu 565	06-872-0391 Fax 06-872-0784
9.	Japan Gas Appliances Inspection Association	Asahi-Bld. 5-29-19 Shiba Minato-ku Tokyo 108	03-3456-3281 Fax 03-3454-3279
10.	Japan Recreation and Miscellaneous Goods Safety Laboratory	4-22-4 Higashi-Komagata Sumida-ku Tokyo 130	03-3829-2515 Fax 03-3829-2549
11.	Japan Tile Testing and Engineering Association	3986-9 Umedaira Sasahara-cho Toki-gun Gifu-ken 507	0572-43-5395 Fax 0572-43-3209
12.	Chemical Inspection & Testing Institute Japan	4-1-1 Higashi-Mukozima Sumida-ku Tokyo 131	03-3614-1101 Fax 03-3614-1109
13.	Japan High Polymer Center	2-22-13 Yanagibashi Taito-ku Tokyo 111	03-3862-4841 Fax 03-3866-8340
14.	Japan Paint Inspecting Association	Tobu-Bld. 1-5-26 Moto-Akasaka Minato-ku Tokyo 107	03-3470-2836 Fax 03-3405-5565
15.	Japan Heating Appliances Inspection Association Inc.	1751 Ohuna-taninomae Kamakura-shi Kanagawa-ken 247	0467-45-6311 Fax 0467-45-7184
16.	Japan Textile Inspection Council	Shiga-Bld. 12-9 Kodenna-cho Nihonbashi Chuo-ku Tokyo 103	03-3662-4665 Fax ---

Table 8. Number of JIS Mark Approvals

As of March 31, 1992

JIS Divisions	A	B	C	D	F	G	H	K	L	R	S	T	Z	Total
Australia	1													1( 1)
China			2								1			3( 2)
Germany												2		2( 1)
Hong Kong	1													1( 1)
Indonesia			1						3					4( 2)
Korea	5	5	6	2		57		9	1		14	2	10	111( 65)
Luxemburg						1								1( 1)
Malaysia			3					1		1				5( 5)
Mexico										1				1( 1)
Philippines					1			1						2( 2)
Qatar						1								1( 1)
Singapore		2	4			1		1						8( 7)
Switzerland												1		1( 1)
Thailand	1	1	5			2	2				2		2	15( 12)
Taiwan	7	7	4	3	1	4		9			2	1	6	44( 38)
U.S.A.			3			2	1			2		1		9( 9)
Total (16 Countries)	15	15	28	5	2	68	3	21	1	7	19	7	18	209(149)

Note: Number of Approved Factories is indicated in the parenthesis.

#### 4.2 Specific Foreign Inspection Body

The role of a "Specific Foreign Inspection Body (SFIB)" is to prepare a report as to the situation of manufacturing facilities (or processing facilities), testing facilities, methods of testing, methods of quality control and other technical manufacturing conditions (or processing conditions) of an applicant's factory by conducting factory on-site examination, in response to request from a company which seeks to get approval for affixing JIS mark on its products.

To become an SFIB, an inspection body shall submit an application to the relevant Minister according to the "Working Guidelines for Acceptance of Foreign Test Data for Application for Marking Approval under the Industrial Standardization Law."

The criteria for designation of an inspection body as a SFIB are shown in Article 2 of the Guideline. In essence, there are following requirements:

(1) Technical competence, (2) Sound financial base and financial stability (3) Neutrality, impartiality, and fairness of inspection service.

The expected role of an SFIB in the JIS marking approval scheme is as follows:

- 1) When an SFIB is asked to carry out an on-site factory examination and to prepare a report on its result by a company which seeks to get JIS marking approval, the SFIB will make a contract with the company as to execution of such examination and issuance of a report.
- 2) After making a necessary preparation for the on-site factory examination, the SFIB will conduct such examination, and issue an inspection report. A copy of the inspection reports shall be enclosed and securely sealed for submission to the relevant Minister.
- 3) The applicant shall make an application to the Minister together with the enclosed and sealed inspection report and shall pay Japanese Yen 35,500/item as examination fee.
- 4) If the Minister thinks the contents of the report are appropriate, and practices of quality control of applicant's factory satisfy the "Matters Investigated and Their Criteria for Permission or Approval Marking Showing Conformation to Japanese Industrial Standards," (See 3.2 Certification Method for items of assessment) the Minister will issue an approval to the applicant.

Approved Inspection Bodies and Specific Foreign Inspection Bodies are as follows:

Table 9. Specific Foreign Inspection Bodies and Approved Inspection Bodies

Date of Designation	Country	Name of Body	Address	Telephone / Fax.	Inspection Zone
86.08.11	USA	* Underwriters Laboratories Incorporated	1825 Walt Whitman Road, Melville New York 11747 USA	+1-516-271-6200 (Fax. +1-516-271-8259)	A, B, C, H, K, S, T
86.08.27	SINGAPORE	* Singapore Institute of Standards and Industrial Research	1 Science Park Drive Singapore 0511	+65-778-7777 (Fax. +65-776-1280)	A, B, C, D, F, G, H, K, L, P, R, S, T, W, Z
87.05.20	USA	ABS Industrial Verification, Inc.	263 North Belt East Houston, Texas 77060 USA	+1-713-874-6540 (Fax. +1-713-874-9553)	B, C, D, E, F, G, H, K, T, Z
87.05.20	SINGAPORE	Societe General de Surveillance Singapore (P.T.E)	71, Ayer Rajah Crescent No. 07-18 Singapore 0513	+65-778-1550	A, B, C, D, E, F, G, H, K, L, M, P, R, S, T, W, Z
87.05.22	USA	United States Testing Company, Inc.	1415 Park Avenue, Hoboken, New Jersey USA / Okulahoma / California.	+1-201-792-2400 (Fax. +1-201-656-0636)	A, B, C, D, E, F, G, H, K, L, M, P, R, S, T, W, Z
87.06.26	UK	British Standards Institution	2 Park Street, London, W1A 2BS United Kingdom. / Milton Keynes	+44-71-629-9000 (Fax. +44-71-629-0506)	A, B, C, D, E, F, G, H, K, L, M, P, R, S, T, W, Z
87.09.30	KOREA	* Korea Inspection Center for Electric and Electronic Products (KETI)	Rm. 301, Samchang Bldg. 173, Tohwa 2-Dong, Mapo-gu, Seoul / HONSYO.	+82-2-717-4781 (Fax. +82-2-717-4784)	C
87.09.30	KOREA	* Chemicals Inspection Center and Testing Institute, KOREA (CITI)	88, 8-ga, Yongdungpo-Dong, Yongdungpo Seoul. / PUSAN / INCYON	+82-2-634-0014 (Fax. +82-2-634-0016)	A, G, H, K, R, S, Z
87.09.30	KOREA	* Korea Academy of Industrial Technology (KAITECH)	222-13, Kuro-Dong, Krou-Gu, Seoul, KOREA	+82-2-863-0611 (Fax. +82-2-860-1285)	B, C, D, E, F, G, H, M, T, W
88.06.29	KOREA	Korea Yarn and Fabric inspection and Testing Institute (FITI)	892-64, Chegi 2-Dong, Tongdaemun-gu, Seoul	+82-2-962-2901 (Fax. +82-2-965-5862)	L
88.06.29	KOREA	* Korea Inspection and Testing Institute for General Merchandise (KITI)	459-28, Garibong-Dong, Kuro-Ku, Seoul	+82-2-856-5623 (Fax. +82-2-866-8626)	K, P, S, T, Z
88.06.29	KOREA	Korea Apparel Testing and Inspection Institute (KATII)	232-22, Yongdu-Dong, Tongdaemun-Gu, Seoul / GROU / JYUNAN / PUSAN / DAETE / OOTA / ZENSYU.	+82-2-925-2451 (Fax. +82-2-925-2462)	L
88.06.29	GERMANY	* Technical Uberwachungs Vereins Rheinland E.V (TUV)	Am Grauen Stein / Konstantin Wille-Str. 1, D-5000 Koln	+49-221-8060 (Fax. +49-221-806-114)	A, B, C, D, E, F, G, H, K, L, M, P, R, S, T, W, Z
89.04.25	FRANCE	Laboratoire National D'Essais (LNE)	1, Rue Gaston Boissier, 75015 Paris FRANCE	+331-532-2989	A, B, C, D, E, F, G, H, K, L, M, P, R, S, T, W, Z

The above fourteen bodies are all Specific Foreign Inspection bodies and \*'s are Approved Inspection Bodies at the same time.

Table 10. Manufacturers or Processors Approved in Calendar Year 1991

Notation: (According to ISO 3166)  
 TW : Taiwan  
 KR : Republic of Korea  
 TH : Thailand  
 US : U.S.A.  
 CN : People's Republic of China  
 PH : Philippine  
 MY : Malaysia  
 QA : Qatar

Approved No. (Approved on)	Name of Approved Factory	Designated Commodity (JIS Number)
TW9038 (Jan. 7, 1991)	Federal Corporation	Rubber Belts (JIS K6322)
KR9001 (Jan. 24, 1991)	Dongyang Steel Pipe Co., Ltd.	Steel Tube for Foundation Work (JIS A5525, A5530)
KR9002 (Jan. 24, 1991)	Dongyang Steel Pipe Co., Ltd.	Steel Tubes for Structural Purposes (JIS G3444)
KR9003 (Jan. 24, 1991)	Dongyang Steel Pipe Co., Ltd.	Steel Pipes for Ordinary Piping (JIS G3457)
TH9013 (Jan. 24, 1991)	Thai Steel Pipe Industry Co., Ltd.	Steel Tubes for Structural Purposes (JIS G3444, G3445)
KR9004 (Feb. 13, 1991)	Kyung Ahn Co., Ltd. Sunchon Plant	Steel Tube for Foundation Work (JIS A5525)
US9008 (Feb. 18, 1991)	Northwestern Steel and Wire Co. Sterling Plant	Rolled Steels (JIS G3101)
KR9005 (Mar. 1, 1991)	Leopard Co., Ltd.	Safety Shoes of Leather (JIS T8101, T8105)
KR9006 (Mar. 12, 1991)	Hanbo Steel & General Construction Co., Ltd. Pusan Plant	Rolled Steels (JIS G3101)
US9009 (Mar. 28, 1991)	HSH Lamp Corporation	Fluorescent Lamps for General Lighting Service (JIS C7601)
TW9039 (Mar. 29, 1991)	Kuang Tai Welding Industrial Co., Ltd.	Welding Solidwires and Welding Rods (JIS Z3312)
TW9140 (Apr. 8, 1991)	An Mau Steel Co., Ltd.	Cold-Rolled Mild Steel Plates, Sheets and Strip (JIS G3141)
KR9107 (May 7, 1991)	Hankuk Star Co., Ltd.	Glow Starters for Fluorescent Lamps (JIS C7603)
TW9141 (Jun. 13, 1991)	Chen-Hao Plastic Industry Co., Ltd.	Plastic Table Wares (JIS S2029)
TW9142 (Jun. 21, 1991)	Chuan Wan Machinery Industrial Co., Ltd. Tansui Works	Welding Solidwires and Welding Rods (JIS Z3312)
TH9114 (Jun. 28, 1991)	Toshiba Consumer Product (Thailand) Co., Ltd.	House Hold Electric Refrigerators, Refrigerator-Freezers and Freezers (JIS C9067)

Table 10. (Continued)

Approved No. (Approved on)	Name of Approved Factory	Designated Commodity (JIS Number)
KR9108 (Jun. 28, 1991)	Ranec Industrial Co., Ltd.	Gas Burning Hot Plates (JIS S2103)
KR9109 (Aug. 9, 1991)	Ace Beds Co., Ltd.	Beds for Domestic Use (JIS S1102)
KR9110 (Aug. 29, 1991)	Lucky Metals Co., Ltd.	Stainless Steel Pipes (JIS G3459, G3463)
TW9143 (Sep. 19, 1991)	Waryu Industry Co., Ltd. 4th Plant	Ceramic Tiles (JIS A5209)
TW9144 (Sep. 19, 1991)	Waryu Industry Co., Ltd. 9th Plant	Ceramic Tiles (JIS A5209)
KR9111 (Sep. 27, 1991)	Hankook Tire MFG. Co., Ltd.	Tires and Tubes for Automobiles (JIS D4230)
TH9115 (Oct. 29, 1991)	Yawata Electrode (Thailand) Co., Ltd.	Welding Solidwires and Welding Rods (JIS Z3312)
PH9101 (Nov. 1, 1991)	Philippine Belt Manufacturing Corporation	Rubber Belts (JIS K6323)
CN9102 (Dec. 5, 1991)	Dairen Sendak Electric Corporation	Plugs and Sokcet-Outlets (JIS C8303)
CN9103 (Dec. 5, 1991)	Dairen Sendak Electric Corporation	Small Switches for Indoor Use (JIS C8304)
KR9112 (Dec. 16, 1991)	Sammi Steel Co., Ltd. Changwon Plant	Stainless Steel wire Rods (JIS G4308)
KR9113 (Dec. 16, 1991)	Sammi Steel Co., Ltd. Changwon Plant	Carbon Steel for Machine Structural Use (JIS G4051)
KR9114 (Dec. 16, 1991)	Sammi Steel Co., Ltd. Changwon Plant	Alloy Steels for Structural Use (JIS G4052, G4102, G4103, G4104, G4105, G4202)
KR9115 (Dec. 16, 1991)	Sammi Steel Co., Ltd. Changwon Plant	Tool Steels (JIS G4401, G4404)
TW9145 (Dec. 25, 1991)	Taiwan Shinkoh Tools Co., Ltd.	Drills (JIS B4301)
KR91116 (Dec. 25, 1991)	Komelon Corporation	Textile Measuring Tapes (JIS B7522)
QA9101 (Dec. 25, 1991)	Qatar Steel Company Limited	Steel Bars for Concrete Reinforcement (JIS G3112)
MY9104 (Dec. 26, 1991)	Matsushita Electric Co., (M) BHD.	Electric Irons (JIS C9103)
MY9105 (Dec. 26, 1991)	Matsushita Air-Conditioning Corp. SDN. BHD.	Room Air Conditioners (JIS C9612)

## 5. International Standardization Activities of Japan

### 5.1 *Situation in Japan taking part in ISO and IEC activities*

Besides the assumption of Mr. Isamu Yamashita to ISO Presidency during the time from 1986 to 1988, Japan participates in ISO and IEC Technical Committees as P member (Participating Member who takes part actively in the discussion at Technical Committee and has a voting right at the same time) and a great number of delegates are attending the meetings of ISO and IEC. The number of participants are increasing year by year.

Japan has been elected to a Council member of ISO since 1969 continuously and assumed the permanent council membership of ISO ever since the General Assembly held in September 1979 together with United States, United Kingdom, France, and Germany. Furthermore, Mr. Akira Aoki, member of ISO Divisional Councils and IEC of JISC and Mr. Toru Watanabe, member of the ISO Divisional Council were named for the members of ISO Executive Board and ISO Technical Board, respectively, both of which are the executive organizations in ISO.

In September 1985, ISO General Assembly was held in Japan for the first time in which some 450 delegate participated from 64 countries and 13 international organizations and the policy for ISO activities for three years from that time on, the collaboration between ISO and IEC, etc., were discussed there.

On the other hand, Prof. Dr. Noboru Takagi was IEC President during the time from 1977 to 1980. In addition, Japan was elected three times to a member of Committee of Action during the time from 1974 to 1980, from 1983 to 1988, and from 1990 until today to contribute to the determination of the principal IEC policy.

Japan is committed to contribute to international standardization and now engaged in the work of Secretaries as for the following Technical Committees and Sub-Committees (the number of such Secretariats is increasing year by year): ISO/IEC

(ISO)

TC8(Shipbuilding and marine structures)/SC9(Lifesaving equipment)

TC8(Shipbuilding and marine structures)/SC11(Advanced navigational instruments and systems)

TC17(Steel)

TC17(Steel)/SC1(Methods of determination of chemical composition)

TC22(Road vehicles)/SC22(Motorcycles)

TC28(Petroleum products and lubricants)/SC5(Measurement of light hydrocarbon fluids)

TC61(Plastics)/SC11(Products)



TC67(Materials and equipment for petroleum and natural gas industries)/SC5(Casing, tubing, and drill pipe)

TC79(Light metals and their alloys)/SC4(Unalloyed (Refined) aluminium ingots)

TC102(Iron ores)

TC102(Iron ores)/SC1(Sampling)

TC114(Horology)/SC11(Indication of accuracy)

TC127(Earth-moving machinery)/SC3(Operation and maintenance)

TC131(Fluid power systems)/SC1(Terminology, classification and symbols)

TC164(Mechanical testing of metals)

TC201(Surface chemical analysis)

(ISO / IEC / JTC1 )

SC15(Labelling and file structure)

SC23(Optical disk cartridges for information interchange)

SC26(Microprocessor systems)

SC29(Coded representation of picture, audio and multimedia/hypermedia information)

(IEC)

SC3C(Graphical symbols for use on equipment)

SC12A(Receiving equipment)

TC35(Primary cells and batteries)

SC47C(Optoelectronic devices and liquid crystal display devices)

SC59E(Ironing and pressing appliances)

TC60(Recording)

TC90(Superconductivity)

TC91(Surface mounting technology)

CISPR/SCB (Interference from industrial, Scientific and medical radio frequency apparatus)

## 5.2 Technical Cooperation to the developing Countries

Introduction and promotion of industrial standardization are indispensable for the progress of industrialization and expansion of international trade, as a base for the promotion of economic development. Developing countries are interested very much in the success in Japan in bringing up the industries which have strong power in international competition and, consequently, the demand for the technical cooperation by Japan in industrial standardization and quality control is being made increasingly today by these developing countries.

In compliance with the request like these, Japan is making efforts to meet them using, for instance, the various schemes in Japan International Cooperation Agency (JICA).

(1) Acceptance of trainees

The following group training courses are held under the auspices of JICA and Japanese Standards Association (JSA) to accept dozens of trainees from abroad every year.

1) Implementation of TQC and Standardization Activities Course (Newly started from 1990 as phase II)

(Industrial Standardization Course (held since 1968 to 1989))

For the governmental officials in charge of industrial standardization and the staff of organizations related to standardization in developing countries. Held once a year for three months for some 15 trainees (amounting in total to 378 as of 1991 FY).

2) Senior Seminar Course on Standardization and Quality Control (held since 1986)

For the officials in leading position in the governmental organizations in charge of standardization in the developing countries. Held once a year for a month for about seven trainees (coming up in all to 60 as of 1991 FY).

3) Certification Systems Course (held since 1979)

For the staff in charge of certification, inspection, examination and the like in the governmental organizations. Held once a year for two months for some 10 trainees (amounting in total to 140 as of 1991 FY)

(2) Dispatch of experts

The experts were sent on to the following countries based on the JICA scheme.

- (a) Technical Cooperation with Saudi Arabia in the standardization of electrical and electronic engineering (phase I: from 1980 to 1989). Three long term experts were sent every year to Saudi Arabian Standards Organization (SASO) relating to SASO Standard making, certification system arrangement, test and inspection. From 1990, Technical Cooperation to SASO aiming at improving "Quality mark system of certificate of conformity and "System of conformity of imported electrical appliances and equipments (self-certification system)" will start with dispatching one long term expert.

- (b) Technical Cooperation with the Philippines in industrial standardization and certification;

One long term expert was sent to the Bureau of Product Standards (BPS), Department of Trade & Industry (DTI) relating to its industrial standardization PS Mark Certification System. The expert advises the BPS on improvement and strengthening of the national standardization and certification.

- (c) Others: The dispatch of the experts in the fields of standardization and quality control is requested from Indonesia, Argentina, Brazil, Pakistan, Singapore, and so on.

(3) The study of development plan in developing countries on JICA base

- (a) The study on the industrial standardization system development in the Republic of Chile.

The study has been under way since 1991 with respect to the formulation of programmes for a unified certification system and diffusion of TQC and company standardization in order to promote the development of industries in Chile. (continued until the end of 1991).

- (b) The study on the industrial standardization and quality assurance improvement programme in Malaysia.

The study has been carried out from the middle of 1991 with respect to preparing a comprehensive plan of action through developing more effective programmes for industrial standardization, certification and quality control, and promoting activities of industrial standardization, certification and quality control in order to improve the quality of Malaysian industrial products, thereby contributing to industrial development and export promotion in Malaysia. (continued until 1992).

- (c) The study on the promotion of TQC in small and medium scale industries and certification system for industrial export products in the Argentine Republic was implemented from 1988 to 1990.

- (d) Others: A number of requests were submitted from Indonesia, Oman, and so on.

(4) The project type technical cooperation.

In order to help educate the engineers and the governmental officials in charge of standardization and quality control in developing countries, the training centre

is established, where the Japanese experts are sent for the activities of cooperation. The training centre is a base to establish and promote industrial standardization and quality control in the country.

Since 1989, five year cooperation plan has been operated in the Industrial Standardization, Testing and Training Center (ISTTC) in Thailand as the first project, and eight long term experts has been dispatched to the center for the activities of cooperation.

(5) Contribution to the United Nations Industrial Development Organization (UNIDO):

Since 1989, \$200,000 to the United Nations Industrial Development Organization (UNIDO) has annually been contributed for the purpose of carrying out seminars and making the educational materials on the industrial standardization and quality control promotion project in the developing countries. In 1990, the seminar was held in Thailand, the second seminar was held in Malaysia in 1991, and the third seminar is scheduled in Indonesia in 1992.

5.3 *Other Activities*

As international standardization needs lots of exchange of information for truly effective and meaningful international standards, JISC intends to communicate bilaterally and multilaterally on international standardization as far as possible. Besides ISO and IEC, JISC participates in PASC (Pacific Area Standards Congress) which is a forum to exchange information on standardization activities of Pacific Area member countries. The fifteenth PASC meeting was held in Tokyo, Japan in April 1992. Bilateral exchanges tend to increase, including European Community besides ISO or IEC-member bodies. The basic standpoint is to facilitate international standardization and to make JIS more international.

- END -